

## WHAT IS CLAIMED IS:

## 1. An image processing apparatus comprising:

decomposing means for decomposing an image into components of a plurality of frequency bands;

5        converting means for converting coefficient values with regard to at least one frequency band of the plurality of frequency bands in such a manner that a frequency distribution of coefficient values of every frequency band will become a prescribed

10      frequency distribution; and

generating means for generating an image using the coefficient values obtained by said converting means.

2. The apparatus according to claim 1, wherein said  
15      converting means converts coefficient values in such a manner that a frequency distribution of coefficient values of every frequency band is rendered substantially flat.

3. The apparatus according to claim 2, wherein said  
20      converting means converts the coefficient values based upon a cumulative frequency distribution of the coefficient values.

4. The apparatus according to claim 1, further  
comprising changing means for changing a conversion  
25      characteristic of the coefficient values obtained by said converting means.

5. The apparatus according to claim 4, wherein said

changing means changes the conversion characteristic in such a manner that coefficient values after conversion will change uniformly at a prescribed ratio.

6. The apparatus according to claim 1, wherein said  
5 decomposing means decomposes the image into components of a plurality of frequency bands using a wavelet transform.

7. The apparatus according to claim 1, wherein said  
10 converting means converts coefficient values in such a manner that a frequency distribution of coefficient values in a range which is part of a range of values that can be taken on by the coefficient values becomes a prescribed frequency distribution.

8. The apparatus according to claim 1, wherein said  
15 converting means holds unchanged coefficient values in a range which is part of a range of values that can be taken on by the coefficient values.

9. An image processing method comprising:

20 a decomposing step of decomposing an image into components of a plurality of frequency bands;

a converting step of converting coefficient values with regard to at least one frequency band of the plurality of frequency bands in such a manner that a frequency distribution of coefficient values of  
25 every frequency band will become a prescribed frequency distribution; and

a generating step of generating an image using

the coefficient values obtained by said converting step.

10. The method according to claim 9, wherein said converting step converts coefficient values in such a manner that a frequency distribution of coefficient values of every frequency band is rendered substantially flat.

11. The method according to claim 10, wherein said converting step converts the coefficient values based upon a cumulative frequency distribution of the coefficient values.

12. The method according to claim 9, further comprising a changing step of changing a conversion characteristic of the coefficient values obtained by said converting step.

13. The method according to claim 12, wherein said changing step changes the conversion characteristic in such a manner that coefficient values after conversion will change uniformly at a prescribed ratio.

14. The method according to claim 9, wherein said decomposing step decomposes the image into components of a plurality of frequency bands using a wavelet transform.

15. The method according to claim 9, wherein said converting step converts coefficient values in such a manner that a frequency distribution of coefficient values in a range which is part of a range of values

that can be taken on by the coefficient values becomes a prescribed frequency distribution.

16. The method according to claim 9, wherein said converting step holds unchanged coefficient values in  
5 a range which is part of a range of values that can be taken on by the coefficient values.

17. A program for causing a computer to implement the image processing method set forth in claim 9.

18. A storage medium storing a program for causing a  
10 computer to implement the image processing method set forth in claim 9.